

Enforcement Undertaking

Section 1

Details of person making this offer		
Section 1	Original	Revision
No revisions.	N/A	N/A

Section 2

Tell us about the act or omission that has led you to make this offer. Please give the location of the offending behaviour, include a National Grid Reference (NGR) if you can.		
What happened or failed to happen? How did it happen? When did it happen?		
Section 2	Original	Revision
No revisions.	N/A	N/A

Section 3

If the act or omission was a breach of an environmental authorisation, please provide the authorisation number and tell us what condition or conditions were breached.		
Section 3	Original	Revision
No revisions.	N/A	N/A

Section 4

If you know the legislation that has been breached, please refer to it here, giving the name of the Act and section number or the name of the Regulations and regulation number.		
Section 4	Original	Revision
No revisions.	N/A	N/A

Section 5

What, if any, environmental impact was caused by the offending behaviour (e.g. any impact on water, air, land, human health or amenity)?		
Section 5	Original	Revision
No revisions.	N/A	N/A

Section 6

What, if any, costs did you avoid, or financial benefit did you make from the offending behaviour?		
Section 6	Original	Revision
No revisions.	N/A	N/A

Section 7

How are you going to ensure the offence does not continue or recur and what date/dates will you have achieved that/those action(s) by? Please specify what will be done and the date which it will be done by.

Section 7.1	Original	Revision
Revised text and date.	<p>HIAL will have in place an Environment Strategy (ES) by the 1st October 2017 which will present how environmental benefits will be delivered during the next five years and beyond.</p>	<p>The Board has given preliminary approval to the development of the Environmental Strategy and is supportive of its implementation. The Environmental Strategy is currently in draft with formal Board approval being secured at the Board Meeting on 30th January 2019. While this has been delayed, HIAL are nonetheless working to the draft Environment Strategy, currently prioritising water quality improvement.</p>

Sections 7.1.1 to 7.1.5	Original	Revision
No revisions.	N/A	N/A

Section 7.1.6	Original	Revision
No revisions. Achieved.	N/A	N/A

Section 7.1.7	Original	Revision
No revisions. Achieved.	N/A	N/A

Section 7.1.8	Original	Revision
Changed completion date for EMPs.	1st October 2018.	1st December 2019. See Appendix (a) for revised programme.

Section 7.1.9	Original	Revision
Included additional offer.	N/A	<p>Dye-testing and review of CAR licences has been carried out at Benbecula, Campbeltown, Dundee, Islay, Kirkwall, Stornoway, Sumburgh, Tiree and Wick airports. Based on the results, applications for varying the licences at these airports is in progress. Draft applications will be submitted to</p>

		the relevant Environmental Protection Officer by 1st February 2019.
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Sections 7.2 and 7.2.1	Original	Revision
No revisions. Achieved 7.2.1.	N/A	N/A

Section 7.2.2	Original	Revision
Revised text and date.	It has been identified that the Light Aircraft Maintenance Area (LAMA) and the Golf Taxiway are not connected to the treatment system. Work to join identified areas of the treatment system will commence in July 2017.	Through extensive site surveys, it was identified that the Light Aircraft Maintenance Area (LAMA) and the northern aprons were not positively connected to the treatment system and an over-pump arrangement was put in place as a temporary measure. This arrangement will be kept in place as one of the measures to reduce the likelihood of adverse impacts on the water environment during winter 2018/2019. Golf taxiway and Alpha holds were also identified as not being positively connected. All of these areas will be connected during Phase 1 of construction, programmed for commencement 22nd October 2018 with completion 18th February 2019. Complete containment will be achieved by 15th October 2020.

Section 7.2.3	Original	Revision
Revisions to bullet points 1 and 3 and addition of 2 new bullet points. Bullet point 2 achieved.	<ul style="list-style-type: none"> Undertake an investigation on permeability of the ground conditions and water table at the swales and filter trenches. This is programmed to commence 	<ul style="list-style-type: none"> Undertake an investigation on permeability of the ground conditions and water table at the swales. This was completed in winter 2017. As a result of these investigations the new and existing swales will be lined with an impermeable material reducing the likelihood of causing an adverse impact on the water environment. Full completion and commissioning of the system is scheduled for 15th October 2020, with system testing being completed by 18th August 2020.

	<p>by the 1st June 2017. Completion dates for actions identified in the swale permeability testing will be dependent on the level of work required;</p> <ul style="list-style-type: none"> • Design, construct and operate a new release mechanism for treated surface water run-off to the Moray Firth, including an application for a new CAR licence. This programme commenced in January 2017. 	<ul style="list-style-type: none"> • Design, construct and operate a new outfall for treated surface water run-off, that removes the need for discharging into the Ardersier Burn. This will result in removing BOD loading as a result of de-icer from the watercourse, allowing the water quality and ecology to improve. The works include the upgrade and extension of an existing outfall to a water body with a larger volume than the original discharge point. Liaison with SEPA is currently underway with regards to applying for a new CAR licence to authorise the new discharge. • New bullet point 4: The final discharge will be removed from the freshwater environment and routed into the marine environment. Dispersion modelling carried out in October 2018 indicated that in the marine environment with a continuously submerged outfall at 0mCD, surface water discharge with a BOD concentration of 38,000 mg/l would still result in compliance with the 'high' DO standard (AMSL, June 2018). The final discharge will achieve 200mg/l BOD (95%ile) with an extreme event limit of 500mg/l BOD (5%ile), but HIAL will set challenging internal targets to achieve 50 mg/l BOD, keeping records to demonstrate 'Beyond Compliance'. • New bullet point 5: Full completion and commissioning of the system is scheduled for 15th October 2020, with system testing being completed by 18th August 2020.
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Section 7.2.4	Original	Revision
Addition of 2 new paragraphs and 9 new bullet points as 'Additional Measures'	N/A	HIAL have committed to investing £5.5 million to improve the water treatment and drainage system at Inverness Airport. Phase 1 of this project will address the majority of the previously disconnected areas but it is recognised that this phase doesn't capture all potential pathways, most notably the unlined swales. The swales will be lined with a hydraulic barrier in Phase 2 of the project. Until this barrier is installed,

<p>for winter 2018/2019.</p>		<p>there is always a minor risk that full treatment of effluent will not be available as per current CAR licence.</p> <p>To mitigate this risk, HIAL will implement the following additional measures for winter 2018/2019 to minimise surface water containing runway de-icer entering the water environment. The measures will be included in the Environmental Management Plan for Inverness, which is currently being updated. Although these measures will help in the short-term, the risk will not be completely mitigated until 18th February 2019 when permanent connections will be completed.</p> <ul style="list-style-type: none"> • The primary de-icer has been changed to a potassium acetate-based de-icer (GEN 3) for winter 2018/2019. This product has a significantly lower BOD loading than glycol-based de-icer (Konsin), although glycol will still have to be used in extreme conditions, with the minor risk that it will still enter the water environment. Changing to the potassium acetate based de-icer will result in less glycol being used at source resulting in a reduction in the amount entering the water environment. • Winter Operations training has been carried out throughout September 2018 with a customised event having taken place on 23rd and 24th October 2018. The training focussed on eliminating unnecessary de-icer applications by encouraging different thought processes. i.e. do I need to de-ice this area, rather than ‘the temperature’s dropping, I need to put de-icer down’. It also looked at how GEN3 should be used as an anti-icing agent. This should prevent surface freezing and therefore reduce the requirement for re-application which is commonly needed when de-icing. All winter operations are subject to on-going review throughout the season, with ‘wash-up’ sessions post season. Records of volumes of de-icer applied are kept across HIAL and this will be audited 31st March 2019 and at the end of each subsequent winter period (31st March) to ensure the quantity of glycol-based de-icer applied is reducing over time. • Direct surface water drainage at the Alpha Hold via booms to the gullies. This will result in a higher percentage of the run-off (containing both glycol and
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		<p>potassium acetate) being collected in the swales with less by-passing the system and entering groundwater.</p> <ul style="list-style-type: none"> • Booms will be installed to facilitate collection of de-icer from the aprons, directing effluent to the drainage system and swales for treatment, reducing the likelihood of causing an adverse impact on the water environment. • Continue to over-pump surface water drainage from the Light Aircraft Maintenance Area (LAMA), Alpha and Echo taxiway and northern aprons to the north swale. This comprises a significant section of the paved and de-iced surface which previously had a direct and un-treated connection to the north ditch. Over-pumping transfers water potentially containing potassium acetate and smaller quantities of glycol from aircraft de-icer from an area representing 42% of the total paved area (322,020 m²) into the treatment system; the other 58% of this total area is already connected. The over-pumped area will be fully connected during Phase 1 construction works bringing the total area connected to 100% by 18th February 2019. In addition, approximately half of the over-pumped area is potentially non-essential and could be left untreated. See Appendix (b) for map. • Promote behavioural change through changing operating practices where applicable and re-training personnel. For example, the Maritime and Coastguard Agency (MCGA) can operate call-outs just from their apron. This would still need clearing and de-icing but this area is connected to the swale. There would still be the requirement to use the Golf taxiway for training, but this would be a lower priority than call-outs, so this could be reduced to essential usage only basis. Re-training the airport's Snow Clearance Officers will ensure de-icing is carried out based on operational necessity. Areas which do not require urgent treatment can be left to thaw naturally or have later treatment if the operational demand changes. These surfaces are considerable in area and include the northern aprons, Echo taxiway, the short runway and Golf taxiway. The total area amounts to approximately 37% of the total paved area. See Appendix (b) for map. • As part of behavioural change, where possible HIAL will use their sweeper to remove excess water from surfaces when low temperatures are forecast. Because there is only one sweeper at Inverness, high risk and high priority surfaces such as Golf taxiway (uneven surface)
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		<p>and Alpha holds to 05 threshold (prone to early freezing) will be targeted.</p> <ul style="list-style-type: none"> • With these measures in place, a higher percentage of run-off containing potassium acetate (primary de-icer) and glycol will be successfully captured, reducing the likelihood of adverse impacts on the water environment. • Daily water quality monitoring of 12 locations is programmed to take place during the winter 2018/2019 period at Inverness to monitor efficacy of the short-term measures. This will include BOD and full spectrum monitoring at a UKAS-accredited laboratory.
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Section 7.3	Original	Revision
Changed date for Declaration of Completion	1st October 2018.	15th October 2020.

Section 8

What are you going to do to restore the environment to the state it was in prior to the offence having occurred? OR If restoration is not possible or not a viable option, what alternate actions are you going to do to benefit or improve the environment? What date/dates will you have achieved that/those actions by?

Section 8.1	Original	Changed to	Rationale
Revised text.	HIAL will act on recommendations within the 5-year term of the EU.	HIAL will act on recommendations within the terms of the EU.	This was an error in the original EU document. There is no specification that the EU term will be 5 years.

Section 8.2	Original	Changed to	Rationale
Revised dates.	HIAL (Inverness Airport) propose to undertake ecological surveys annually, until otherwise agreed with SEPA, to monitor and review the findings.	HIAL (Inverness Airport) propose to undertake ecological surveys annually, until otherwise agreed with SEPA, to monitor and review the findings. They will commence by 31st March 2019.	Ecological surveys are best carried out in spring, summer and autumn months to avoid the winter period when some plant and animal species will not be present.

Section 9

If you intend to make a financial donation to a third party, tell us the amount, who it will be paid to, why and the date you will make the payment.			
Sections 9.1 to 9.1.2	Original	Revision	
No revisions. Achieved.	N/A	N/A	
Section 9.1.3	Original	Revision	Rationale
Date changed and revised text.	Discussions with the local specialist are underway and formal engagement is expected within February 2017.	Discussions with HIAL's consultants are currently underway and formal engagement of a specialist is expected by 31st March 2019.	HIAL are bound by Public Contracts Scotland regulations, therefore, are not allowed to offer competitive advantage to any one group of tenderers.

Section 10

What additional commitments are you making to benefit or improve the environment? What date/dates will those commitments be fulfilled by?		
Section 10 introduction, Environmental Policy diagram and 10.1	Original	Revision
No revisions.	N/A	N/A
Section 10.2	Original	Revision
Date changed and revised text to bullet point 1.	A commitment will be made to environmental improvement. This will be made in the form of a strategy published via the	A commitment has been made to environmental improvement which will be communicated through a strategy document published via the Company's

		<p>Inverness and Wick (drainage points 1 and 2). Improvement works at other HIAL sites are prioritised by CAS compliance, with further investigatory and rectification works at Wick John O’Groats Airport programmed to be completed by 30th April 2019. These new measures comprise:</p> <ul style="list-style-type: none"> ○ Line drain or eliminate source of leak at runway 31 end (discharge Point 2). ○ Assess attenuation tank integrity. ○ Investigate and eliminate the source of contamination at sample Point 3. ○ Assess the viability of implementing a manual option for the current TOC analyser system to manually override valve release mechanisms. ○ Install sensor alerting and live monitoring system to monitor storage tank levels, give early warning of system failure and allow for rapid repair or manual valve shutdown. <p>It is possible that major work to the surface water drainage system at Wick may be required in future, but this will be informed by the results of the initial investigations above.</p> <p>New bullet point 5: Other measures in place for winter 2018/2019 at Wick Airport are:</p> <ul style="list-style-type: none"> ○ Change from Konsin to GEN 3 de-icer as the primary airfield de-icer by end of October 2018 which will also include introduction of telemetry to accurately record amounts applied;
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		<ul style="list-style-type: none"> ○ Support changeover with GEN 3-specific training at Inverness (October 23rd and 24th 2018) and Wick to improve understanding of its properties and principles of application; ○ Implement tactical de-icing of areas, carried out based on operational necessity with areas which do not require urgent treatment being left to thaw naturally or for later treatment if the operational demand changes; <p>Monitor results of these measures through existing sampling and testing programme.</p> <p>New bullet point 6: Formation of a Scottish Airports Environmental Advisors' working group is underway. An initial meeting with other Scottish Airport Environmental Advisors in September 2018 highlighted winter operations as a sector-wide issue, and one which may present future opportunities and drivers to recover and recycle de-icer. This would deliver on 'Beyond Compliance' through a change in attitude to preventing de-icer entering the water environment in the first place. It would also align well with the 'circular economy' ambitions to keep materials in use for as long as possible. See Appendix (c). Carry out feasibility study into options for re-use and recycling of glycol by 31st March 2020.</p>
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Section 10.3	Original	Revision
No revisions.	N/A	N/A

Section 10.4	Original	Revision
No revisions.	N/A	N/A

Section 10.5	Original	Revision
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Revised text in final bullet point in 10.5.2. Achieved.	HIAL aims to use renewable electricity wherever possible.	HIAL switched to using renewable electricity in September 2018 via Renewable Energy Guarantees Option (REGO).
Section 10.6	Original	Revision
No revisions.	N/A	N/A
Section 10.7	Original	Revision
No revisions.	N/A	N/A
Section 10.8	Original	Revision
No revisions. Achieved bullet point 4.	N/A	N/A
Section 10.9	Original	Revision
No revisions.	N/A	N/A
Section 10.10	Original	Revision
No revisions.	N/A	N/A

Section 11

Has the offending behaviour had an impact on the local community?	YES/NO
If YES, have you consulted with them regarding this offer?	YES/NO
Section 11	Original
No revisions.	N/A

Section 12

<p>If you intend to make a contribution towards SEPA's costs in connection with this offer, tell us the amount and the date you will make the payment. Alternatively, if you have not requested information from SEPA in respect to our costs and intend to make a contribution please state this intent.</p> <p><i>Please do not submit any payments with this offer. Any payments submitted to SEPA will be returned prior to any decision being made by SEPA in respect to your offer.</i></p>		
Section 12	Original	Addition to text in original Section 12
Text revised.	Costs incurred by SEPA as a result of the offending behaviour resulting in this EU	HIAL is a public corporation wholly owned by the Scottish Ministers. The company is loss making and is supported by subsidies from the Scottish Government. A number of

	<p>have been calculated by SEPA as:</p> <p>336 hours at £87 per hour</p> <p>£29 232</p>	<p>the elements of the EU have now been progressed and HIAL have recompensed SEPA for the 336 hours indicated above.</p> <p>In recognition of the further regulatory work SEPA have undertaken in respect of this EU HIAL will make a further payment of £31,150.</p>
<p>Known Amount: £31,150</p>	<p>Date for payment: As agreed in writing with SEPA</p>	

Statement:

I confirm that any financial donation to a third party mentioned in Section 9 is a donation that I will receive no benefit from.

This offer of undertaking is made in accordance with Schedule 3 of the Order



Date: 10/12/2018